Non-Secure Item*Non-Secure Item***Non-Secure Item***Non-Secure Item**

ISTEP+ Applied Skills Sample for Classroom Use

Math – Grade 7

(Constructed-Response)

A student claims that $8x - 2(4 + 3x)$ is equivalent to $3x$.

The student's steps are shown.

Expression: $8x - 2(4 + 3x)$

Step 1: $8x - 8 + 3x$

Step 2: $8x + 3x - 8$

Step 3: $11x - 8$

Step 4: $3x$

Part A

Describe ALL errors in the student's work.

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Part B

If the errors in the student's work are corrected, what will be the final expression?

Show All Work

Expression _____

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Content Standard: **7.AF.1:** Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring (e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process.			
Process Standards: 3, 7			
Calculator: Yes			
Item Type: Extended-Response	Pts: 4	DOK: 3	Grade: 7

Exemplary Response:

In Step 1, the student did not apply the distributive property correctly. The student forgot to multiply -2 and 3x. In Step 4, the student should not have subtracted 8 from 11x because they are not like terms.
OR
Other valid descriptions of the errors

AND

$2x - 8$

Sample Process:

$8x - 2(4 + 3x)$
$8x - 8 - 6x$
$2x - 8$